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(54) Title: IMPROVEMENTS IN AND RELATING TO OIL WELL PERFORATORS

(57) Abstract: An oil and gas well shaped charge perforator capable of providing an exothermic reaction after detonation is provided, comprising a housing, a high explosive, and a reactive liner where the high explosive is positioned between the reactive liner and the housing. The reactive liner is produced from a composition which is capable of sustaining an exothermic reaction during the formation of the cutting jet. The composition may be selected from any known formulation which is suitable for use in an oil and gas well perforator, typically the composition will comprise at least one metal and at least one non-metal, wherein the non-metal is selected from a metal oxide, or any non-metal from Group III or Group IV or at least two metals such as to form an intermetallic reaction. Typically at least one of the metals in the invention may be selected from Al, Ce, Li, Mg, Mo, Ni, Nb, Pb, Pd, Ta, Ti, Zn or Zr. The liner composition may preferably be a pressed particulate composition, such that the material is consolidated under pressure to form the desired shape of the liner. To aid consolidation a binder may also be added.

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